REMARKS

Applicant respectfully traverses the final rejection of claims 1, 3 and 5-7 under 35 U.S.C. §103(a) as being unpatentable (obvious) over Inamori '974 in view of Wyse '001 and further in view of Beaucourt '463.

With **exceptions** to be addressed below, the Examiner's comments with respect to each of these three references are **identical** to those presented in the first Office Action. Therefore, Applicant incorporates herein by reference the Remarks contained in the Amendment filed on August 31, 2005.

With respect to Inamori, the Examiner adds that Inamori "discloses the varying of the control voltage, for a given input voltage, to obtain the desired output voltage, (Fig. 4)." Applicant claims no novelty, *per se*, in varying the control voltage, for a given input voltage, of an amplifier to obtain a desired output voltage. Inamori's Fig. 4 shows nothing more than a conventional gain curve. Applicant finds absolutely no teaching or suggestion of Applicant's claimed method and circuit limitations: "only when said output power is less than said first predetermined limit value", reducing the input power, "for the same output power, to a value causing said control voltage to be increased to a second predetermined value where the power amplifier has only a linear said gain".

The Examiner's comment about the teaching of Wyse is the same as that presented in the first Office Action ("Wyse teaches that…"). However, with respect to the motivation to combine Inamori and Wyse, the Examiner now adds "because of the advantages in balance, injection level, and conversion loss that are offered by receivers that use HBT technology (Wyse Column

1 Lines 24-32)". Applicant respectfully submits that this added comment for motivation finds no support in either of the references and must be based only on the prohibited use of hindsight knowledge of Applicant's own disclosure.

Applicant agrees with the Examiner's **added** comment that neither Inamori nor Wyse discloses "the operation of a power amplifier in a non-linear saturation [?] region that is entered when the output power level exceeds an upper value".

Thus, the critical reference (in the Examiner's opinion) in the three-way rejection under 35 U.S.C. §103(a) appears to be Beaucourt, and the Examiner's following assertion of *prima facie* obviousness of Applicant's claimed subject matter:

> At the time that the invention was made, it would have been obvious to one of ordinary skill in the art [to use the teaching of Beaucourt] to modify the invention of Inamori et. al. as modified by Wyse by providing for the reduction of input power when output power drops below a certain predetermined threshold and by providing for the maintenance of a constant input power and the varying of the control voltage when the amplifier is operating in the non-linear saturation region.
>
> One of ordinary skill in the art would have been motivated to make this modification because of the increased efficiency that such a procedure would yield.

The Examiner is correct when stating that neither Inamori et al. nor Wise discloses:

"the practice of reducing the input power level to a power amplifier if…[the] output power level falls below a predetermined limit value"; or

"the operation of [the] power amplifier in a non-linear…region" (Applicant does not understand why the Examiner has introduced the word "saturation") when the output level

exceeds [said predetermined] value" (and **not** an "upper value", which seems to be distinct from the first value).

What is important, however, is that the normal operation of the power amplifier in Applicant's invention is in the second area "B" (Fig. 1) which corresponds to non-linear operation (see specification, page 4, lines 12-14). In this case, the input power is kept constant, and the variation of the output power is obtained by varying the control voltage Vc.

Only when the output power becomes too low is, according to Applicant's invention, the input power shifted to a lower value **while keeping the same output power,** thus leading to a change of the control voltage Vc. The power amplifier then operates in a linear mode (see area "A" in Fig. 1, and specification page 4, lines 24-27).

Indeed, Beaucourt clearly teaches the use of a limiter (and **not** of an amplifier) which **must work in a linear area** so as to avoid any risk of saturation. There is absolutely **no** teaching, suggestion, or indication:

that the output power may be "greater than a predetermined limit value", and that, in this case, the input power must be "kept constant and the control voltage…varied" in order to be in a non-linear area (B); or

that the output power may be "less than said predetermined limit value", and that, in this case, the input power must be "reduced, for the same output power, [thus] causing" an increase of the control voltage to produce operation in the "linear" area ("A").

Thus, Applicant respectfully submits that the combined teachings of the three applied references do not teach or suggest all of Applicant's method and circuit claim limitations (claims 1 and 3), especially:

wherein "the control voltage is varied to obtain a non-linear said gain…as long as said output power is greater than a first predetermined limit value"; and

wherein "said **input power is reduced**, for the same output power, to a value causing said **control voltage to be increased** to a…value…where the power amplifier has only a linear said gain, …only when said output power is less than said first predetermined limit value".

As previously explained, Applicant's claimed invention is directed to solving the very specific problem described in Applicant's specification at page 2, lines 21-34.

While the three references applied by the Examiner relate generally to conventional gain/power transfer characteristics of an amplifier, these references, taken alone or in combination, do not recognize this problem solved by Applicant's invention, and certainly do not teach or suggest the above-quoted limitations, i.e., the last two paragraphs, taken together, of the independent claims 1 and 3.

Even though Applicant recognizes that an Examiner must read the disclosure of a patent application in order to search and apply the prior art, Applicant respectfully submits that in this case the Examiner's asserted rationales for the proposed modifications and combinations of the three references must be based on the prohibited use of hindsight knowledge of Applicant's own disclosure, as there certainly is no suggestion or motivation disclosed in these references for the Examiner's proposed modifications/combinations.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the final rejection of claims 1, 3 and 5-7, and to find the application to be in condition for allowance with claims 1, 3 and 5-7. The above amendments to independent claims 1 and 3 merely make explicit what was already implicit in these claims, and would not require further consideration and/or search by the Examiner. The above amendments were not earlier made because they were provoked by the Examiner's statements in the "final" Action of December 2, 2005. In any event, the MPEP specifically provides that an Examiner may allow an application (after final action) anytime the application is placed in condition for allowance.

REQUEST FOR INTERVIEW

However, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to **call the undersigned attorney** to discuss any unresolved issues and to expedite the disposition of the application. **In particular,** Applicant feels strongly that the invention intended to be claimed would not have been obvious from the combined teachings of the three references applied by the Examiner, and Applicant's attorney would like the opportunity (if Examiner Genack still feels that the application is not now in condition for allowance) to discuss with the Examiner whether the claims could be amended better to define (in the Examiner's opinion) the intended invention as **described** in Applicant's specification.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this application, and any required fee for such extension is to be charged to Deposit Account No. 19-4880. The Commissioner is also authorized to charge any additional fees

under 37 C.F.R. § 1.16 and/or § 1.17 necessary to keep this application pending in the Patent and Trademark Office or credit any overpayment to said Deposit Account No. 19-4880.

Respectfully submitted,

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23373
CUSTOMER NUMBER

Date: March 2, 2006